

Charles B. Dudley House
802 Lexington Avenue
First Ward Neighborhood
Altoona
Blair County
Pennsylvania

HABS No. PA-5502

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HISTORIC AMERICAN BUILDINGS SURVEY

CHARLES B. DUDLEY HOUSE
HABS No. PA-5502

Location: 802 Lexington Ave., Altoona, Blair County, Pa.

Present Owner: Carl B. Weimer, 510 Blair St., Hollidaysburg, Pa., 16648.

Present Use: The house has been vacant since 1970.

Significance: The two-and-a-half-story, side-passage house at 802 Lexington Ave. is representative of one type of housing stock found throughout Altoona, although most surviving examples are of brick veneer, rather than brick. Built as rental property in 1872, the house has a brief historical association with the chemist Charles B. Dudley (1842-1909), who purchased the property in 1896 and resided there from 1902 until his death in 1909. Dudley established the Pennsylvania Railroad Company's testing laboratory in Altoona, pioneering the use of applied science in industry. He was also a founding member of the American Society for Testing Materials and from 1902 until 1909 served as the organization's first president.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: 1871-72. A brick house valued at \$800 first appears in Altoona's 1872 tax assessments books. The lot was unimproved in 1871.
2. Architect: None.
3. Original and subsequent owners: The house was constructed for Andrew J. Sprankle, a partner in J. A. Sprankle and Bros., a dry goods and grocery business, soon after he acquired the lot from Robert H. McCormick. Sprankle, one of Altoona's larger landholders, rented out the house and lived elsewhere. Charles B. Dudley purchased the house and the double house next door from Sprankle's estate in 1896. After his death in 1909, Mary V. C. Dudley, his wife, sold the house to Manor Real Estate Co., a subsidiary of the Pennsylvania Railroad Company (PRR), which rented it to the families of railroad employees for many years. In 1949 the property was acquired by Orinoco Tribe No. 424, Improved Order of Red Men, a fraternal organization which met in the house until 1970. (City directories. Deed books: 40/438, 110/384, 196/688, 606/466)
4. Original plans and construction: The house, which was built as a single-family dwelling, evolved into its present form through three major phases of construction. Judging by the surviving physical evidence, the original two-and-one-half-story rectangular house measured 23'-3/4" x 32'-11"--one half of its present length. It was one room wide and two rooms deep, with a side passage extending the length of the house, a full, unfinished basement and a full attic finished with plaster and wallpapers. The original stairway, which has since been removed, appears to have risen along the southwest wall, beginning approximately 15 feet from the front door.
5. Alterations and additions: The house doubled in length and was substantially remodelled twice between 1872 and 1909. It seems that the side-passage plan remained functional to the families who lived there, but individual rooms changed shape and function several times.

Although the first major renovation cannot be documented precisely, it was definitely undertaken before 1894, when the changes were recorded on Altoona's Sanborn Fire Insurance maps. A two-story brick addition measuring approximately 13'-6" x 13' was built on the rear of the house, turning the rectangular plan into a T-shaped plan. The 1872 kitchen was shifted back to the new addition,

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where an exterior door on the northeast side provided access to the yard. The removal of the kitchen to the rear allowed the two rooms in the original block to take on the more formal functions of dining and sitting rooms. A new bedroom was added to the second floor, and the unfinished attic provided additional storage space. The northwest facade, now enclosed by a second rear addition, still retains the pair of narrow, round-arched windows that once supplied light to the attic. A full, single-story front porch, since removed, and a partial porch near the north corner of the house were also built at this time.

In ca. 1906 Charles and Mary Dudley renovated the house extensively. They extended the northeast and southwest sides of the pre-1894 addition until they were flush with the original block, and built a 19', two-and-one-half story brick addition to the rear of the house. Again, a kitchen and pantry area were installed in the new section, enabling the front three first-floor rooms to take on even more specialized functions. The former kitchen was converted into a dining room with a three-part window and interior window seat. On the southwest side, a new stairway to service the rear of the house was built between the former exterior wall and the new one.

Although documentation is lacking, it seems reasonable to assume that the Dudleys were responsible for several other improvements, including the house's new slate roof (later replaced with composition roofing), and the ornamental, cast-iron fence which stood around three sides of the property until the 1960s. These substantial changes seem more likely to have been made by a new owner than by the aging Andrew Sprankle, who regarded the house as merely rental property. During the occupancy of the Melcher family, from 1932 to 1947, the house was painted light yellow with brown trim.

When Orinoco Tribe No. 424, Improved Order of Red Men acquired the house in 1949, its members removed most of the interior walls and the original front staircase to accommodate their club activities. The front porch was also dismantled, although evidence of its entablature and turned supports remain scarred on the brick. The original front door was replaced by a pair of institutional glass and aluminum doors, several of the windows were bricked up, and an exterior staircase of concrete block was added to the rear facade. The Melcher's lawn and gardens were turned into a gravel parking lot for the fraternal organization. (Sanborn maps: 1894, 1909, and 1932. Tax assessments. City directories. Interviews with Jean Melcher Hoopes)

B. Historical Context:

By the second decade of the twentieth century, "various places" along Lexington Avenue were counted among the finest residential neighborhoods in Altoona.¹ While architect-designed Italianate and Second Empire mansions were interspersed all along the avenue, most of the houses in the 800 block were more modest frame and brick-veneered dwellings, the homes of artisans, mechanics, and clerks. Some were constructed in the 1870s, like the Dudley's, while the few brick-veneered houses date from ca. 1890-1900. The house at No. 802 appears to be a rare, brick example.

This house was the home of Charles B. Dudley from about 1902 until his death in 1909. Dudley, who was born in 1842, received his doctorate in chemistry from Yale University's Sheffield Scientific School. In 1875 he moved to Altoona, becoming a research scientist for the PRR. Dudley went on to establish the railroad's widely acclaimed testing laboratory, pioneering the use of applied science in industry. He is perhaps best known for developing standard procedures for analyzing and testing materials, which in turn improved industrial quality and productivity. His research helped establish tighter controls on the transportation of explosives, and

¹Jesse C. Sell, Twentieth Century History of Altoona and Blair County, Pennsylvania (Chicago: Richmond-Arnold Publishing Co., 1911), 285-6.

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prompted Congress to enact legislation regarding the enforcement of safety standards in the railroad industry.² Dudley also took an active interest in the community: he was vice-president of the Second National Bank, president of the Juniata Club, chairman of the PRR's Library Committee, and a member of the city's board of health.

When Dudley purchased the house and the double house next door in 1896, he continued to rent them out while he resided downtown at the Logan House, the PRR's luxury hotel, or at the Juniata Club on Chestnut Street. At the turn of the century, Alexander J. Everhart, a machinist, rented the house with his wife, Emma. In 1900, Dudley boarded with the Everharts. Shortly thereafter, Dudley married Mary V. Crawford and took over the entire house. In 1909, Manor Real Estate and Trust Co., a subsidiary of the PRR, purchased the house from Dudley's widow for \$16,000. It was only valued at \$6,000. The additional \$10,000 was probably a widow's pension.³ The real estate company continued to rent the property until 1949, when it was purchased by the Improved Order of Red Men, who occupied the house until 1970.

Due to the historical importance of Charles B. Dudley, the house received National Register status in 1976.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: The two-and-a-half-story, side-gable house has a plain brick facade ornamented with pairs of scrolled brackets under the eaves and returns on the gable ends. Such simple Italianate detailing is also typical of the later brick-veneered examples found on the East Side of Altoona.
2. Condition of fabric: Good-fair.

B. Description of Exterior:

1. Over-all dimensions: The rectangular red-brick house has a three-bay front and measures 23'- 3/4" x 62'-2".
2. Foundations: The rough-cut, semi-coursed stone foundations are approximately 1'-8" thick.
3. Walls: Rear and side walls are of brick laid in common bond. The Lexington Avenue facade is distinguished by the use of facing brick in running bond.
4. Structural systems, framing: The house was built with brick-bearing walls and wooden joists. The roof of the 1872 house appears to be framed with common rafters but lacks a ridge board. The first and second additions have typical common rafter systems.
5. Porches: There is a small service porch with a shed roof and two turned supports at the northern corner of the building. The porch has two stone approach steps, wood flooring, and wooden roof construction.
6. Chimneys: Two rectangular chimneys project through the northeastern part of the 1872 roof, on either

²For more detailed information on the life and achievements of Charles Dudley, see The Life and Life-Work of Charles Benjamin Dudley, Ph. D. (Philadelphia: American Society for Testing Materials, 1909), a memorial volume containing reflections, speeches, and excerpts from Dudley's work. See also, James Sheire, National Register Nomination for the Dudley House, 1976.

³City directories. PRR Board of Directors Meetings Minutes 21 (6/22/1910): 217.

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side of the ridge. A third chimney, at the rear of the first addition, and a fourth chimney in the ca. 1906 addition originally served the kitchen stove on the first floor and metal heating stoves on the second.

7. Openings:

- a. Doorways and doors: The main entranceway, at the left of the facade, has been obscured by recent alterations. A pair of glass and aluminum doors have replaced the original front door. There are two secondary entrances on the northeast facade, each with five-panel exterior doors.
- b. Windows: The first- and second-floor windows are arranged in three bays in the front, six on the sides. At the first floor, the windows have two-over-two-light, segmentally arched sash with segmentally arched wood lintels above. At the second floor, all of the windows have been filled with brick. The wooden lintels on the second floor are also segmentally arched, except for those on the southwest facade, which are flat-arched. The attic windows are round-arched with two-over-one-light sash and round-arched brick lintels.

8. Roof:

- a. Shape: The 1872 house has a side-gabled roof. The rest of the house has a front-gabled roof with returns on the gable ends. The entire roof has been covered with green composition roofing.
- b. Cornice: The cornice has four pairs of scrolled brackets and returns on the gable ends.
- c. Dormers: The gabled dormer has paired, round-arched one-over-one-light windows, slate-shingle siding, and a composition roof.

C. Description of Interior:

1. Floor plans:

- a. Basement: The basement, which runs the full length of the house, has a concrete floor, and unfinished walls and ceiling.
- b. First and second: Most of the interior walls and all of the fireplaces have been removed; the first and second floors consist of large, open rooms with service areas to the rear.

2. Stairways: The pre-1894 wood stairway rises against the southwest wall, accessible only from the back of the house.

3. Flooring: All floors now have diagonal pine flooring which appears to have been sub-flooring at one time; former occupant Jean Hoopes remembers hardwood floors.

4. Wall and ceiling finish: Originally plaster on lath. The earliest portion of the attic, finished with plaster on lath and wallpapers, was probably used as a bedroom. The remainder of the attic has exposed timber framing.

5. Openings: Typical interior doors have five rectangular panels. Simple, molded trim remains around the windows and doors at the rear of the first and second floors, and in the oldest portion of the attic.

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D. Site:

1. General setting and orientation: The house stands on a double lot at the northwest corner Lexington Avenue and 8th Street, facing southeast.
2. Outbuildings: A brick-veneered garage from the 1920s was demolished when the fraternal organization took over the property.
3. Landscaping, enclosures: A ca. 1930s photograph shows a cast-iron fence along the street and alley sides. There were also foundation plantings, a variety of flower gardens near 8th Street, and a trellis with climbing vines on the service porch.

PART III. SOURCES OF INFORMATION

- A. Early views: Photograph of the back yard looking northeast, showing a portion of the rear porch, ca. 1930s. Collection of Jean Melcher Hoopes, Hollidaysburg, Pennsylvania.
- B. Interviews: Jean Melcher Hoopes, interviews by Nancy Spiegel, Altoona and Hollidaysburg, Pa., summer 1989. Hoopes's family rented the house from 1932 to 1947. Her father, William D. Melcher, was an engineer for the PRR, and a member of the railroad band.

C. Bibliography:

1. Primary sources:

Deed Books and Tax Assessment Records. Blair County Courthouse, Hollidaysburg, Pennsylvania.

Improved Order of Red Men. Membership records, account books, and ceremonial materials belonging to Orinoco Tribe No. 424 can be found in the house.

Insurance Maps of Altoona, Pennsylvania. New York: Sanborn-Perris Co., 1894.

Insurance Maps of Altoona, Blair County, Pennsylvania. New York: Sanborn Map Co., 1909.

Insurance Maps of Altoona...Pennsylvania. New York: Sanborn Map Co., 1932.

PRR Board of Directors Meetings Minutes, State Archives, Harrisburg, Pennsylvania.

2. Secondary sources:

Sell, Jesse C. Twentieth Century History of Altoona and Blair County, Pennsylvania. Chicago: Richmond-Arnold Publishing Co., 1911.

Sheire, James. National Register Nomination for the Charles B. Dudley House, 1976.

PART IV. PROJECT INFORMATION

This report was part of a larger project to document the city of Altoona, Pennsylvania. The project was undertaken by

the Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER), Robert Kapsch, chief, at the request of America's Industrial Heritage Project (AIHP), Randy Cooley, director. An overview of the history of the city (HABS No. PA-5784) and an overview of the first ward (HABS No. PA-5788) provide context for these buildings as well as a comprehensive list of sources. See also additional HABS reports on buildings in the city and other neighborhoods.

This report was prepared by Nancy Spiegel in the summer of 1989 under the direction of Alison K. Hoagland, HABS historian and Kim E. Wallace, supervisory historian. Spiegel's and other project historians' work was published as Railroad City: Four Historic Neighborhoods in Altoona, Pennsylvania (Washington, D.C.: HABS/HAER, National Park Service, 1990), edited by Kim E. Wallace and Sara Amy Leach.

CAD/Photogrammetry

Since the 1950s, HABS and HAER have used the proven technology of glass plate stereophotogrammetry to produce measured drawings, although infrequently because of the expense. Rollei developed a new photogrammetric system in the mid-1980s that used convergent film images produced by semi-metric cameras and computer software with mathematical algorithms that extracted dimensions from the images by digitizing from photographic enlargements. The inherent flexibility of the film was offset by a reseau grid (a pattern of cross hairs) superimposed on each negative. The output from the system was digital computer files that could be recognized by computer-aided-drafting (CAD) programs such as AutoCAD. A major advantage of the new system was that the system was significantly less expensive than traditional glass-plate stereophotogrammetry.

HABS/HAER leased the Rollei version of this CAD/photogrammetry system, including a Rolleimetric 6006 camera, in 1989 to demonstrate its capability to produce HABS/HAER documentation. The Dudley House and Masonic Temple in Altoona were among the structures recorded. They were selected because they were the focus of a traditional hand-measured drawings project and could serve as a basis of comparison for accuracy and cost. The experiments proved the viability of the system in meeting HABS/HAER standards for measured drawings, although the Rolleimetric 6006 camera produced negatives too small ($2\frac{1}{4}" \times 2\frac{1}{4}"$) to meet the HABS/HAER standard for large format photography.

John A. Burns was the project leader for the CAD/photogrammetry demonstration project. The Altoona recording was carried out with the support of the HABS summer team.